

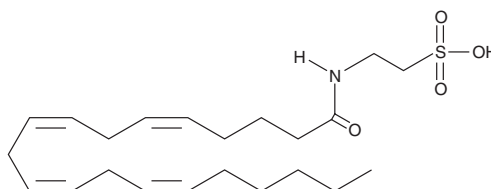
Product Information



N-Arachidonoyl Taurine

Catalog No. 10005537

Formal Name: 2-[(1-oxo-5Z,8Z,11Z,14Z-eicosatetraenyl)amino]-ethane sulfonic acid
MF: C₂₂H₃₇NO₄S
FW: 411.6
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in methanol



Laboratory Procedures

For long term storage, we suggest that N-arachidonoyl taurine be stored as supplied at -20°C. It will be stable for at least one year.

N-arachidonoyl taurine is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of N-arachidonoyl taurine in these solvents is 20 and 10 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of N-arachidonoyl taurine is needed, it can be prepared by evaporating the methanol and directly dissolving the neat oil in aqueous buffers. The solubility of N-arachidonoyl taurine in PBS (pH 7.2) is at least 1.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Several different arachidonoyl amino acids, including N-arachidonoyl dopamine (NADA) and N-arachidonoyl-L-serine (ARA-S), have been isolated and characterized from bovine brain.¹ During mass spectrometry lipidomics analysis of rat brain, a series of fatty acyl amides of a third amino acid, taurine, was discovered.² This novel class of compounds is present in kidney and activates members of the transient receptor potential (TRP) family of calcium channels.³ N-arachidonoyl taurine, a prominent N-acyl taurine, activates both TRPV1 and TRPV4 with EC₅₀ values of 28 and 21 μM, respectively.³

References

- Huang, S.M., Bisogno, T., Petros, T.J., *et al.* Identification of a new class of molecules, the arachidonoyl amino acids, and characterization of one member that inhibits pain. *J. Biol. Chem.* **276(46)**, 42639-42644 (2001).
- Cravatt, B. and Maxey, K.M. Personal communication.
- Saghatelian, A., McKinney, M.K., Bandell, M., *et al.* A FAAH-regulated class of N-acyl taurines that activates TRP ion channels. *Biochemistry* **45(30)**, 9007-9015 (2006).

Related Products

1-Arachidonoyl Glycerol - Cat. No. 62150 • 2-Arachidonoyl Glycerol - Cat. No. 62160 • Arachidonoyl Ethanolamide - Cat. No. 90050 • Arachidonoyl 2-Fluoroethylamide - Cat. No. 90054 • N-Arachidonoyl Dopamine - Cat. No. 90057 • O-Arachidonoyl Ethanolamide (hydrochloride) - Cat. No. 91050 • N-Arachidonoyl-L-Serine - Cat. No. 10005455 • N-Oleoyl Taurine - Cat. No. 10005609 • N-Stearoyl Taurine - Cat. No. 10005610 • N-Palmitoyl Taurine - Cat. No. 10005611

WARNING: THIS PRODUCT IS NOT FOR HUMAN OR ANIMAL DISEASE DIAGNOSIS OR THERAPEUTIC DRUG USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSD supervisor at your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com